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AUTHOR Skipper, Charles E.
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ABSTRACT

Reported was the 3-year longitudinal study on the influence of a living arts center of a public school system on the development of creative behavior in adolescents. Both experimental and control groups (adolescents in grades seven through 10) of 188 each were divided into high, middle, and low creative groups based on test scores from a creativity test. Attrition after 3 years reduced the experimental group to 35 adolescents. After a normal school day, the students participated in programs on the various arts. An expression of creative values by students, their families, nationally recognized artists, federal government, local community, and governmental agencies was said to characterize the program. Although the students concentrated in a specific chosen area, they were encouraged to explore other art areas. Several testing techniques were used to measure the creativity of the students. In general, participants were found to gain in ideational, fluency, flexibility, originality, elaboration and inventive level compared to pretest scores. The participants experienced significantly more community cultural programs than did the control group. An interesting result was said to be the finding that the male subjects became more sensitive to the aesthetics in life. (CB)

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A Longitudinal Study of Creative Abilities in Adolescents

Charles E. Skipper
Miami University

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The research on creativity has been deficient in longitudinal studies describing deliberate, systematic methods to develop the creativity in adolescents. This three year longitudinal study describes the influence of the Living Arts Center of the Dayton Public Schools on the development of creative behavior of adolescents.

The Center is an example of a larger environment which values creativity. It combines an expression of creative values on the part of students, their families, nationally recognized artists, the federal government and the local community and governmental agencies. Students participated after the normal school day and on Saturday in creative writing, dance, drama, music, and visual arts activities. Although a student selected one art area in which he concentrated, he was encouraged to explore and experiment in the other art areas. Guest artists of national fame visited the center to perform and conduct seminars. Field trips, art shows, writing exhibits, theatre and dance productions were added enrichment to the typically close teacher-student relationship that characterised the program. Courses were conducted in an old warehouse, especially remodled to fit the needs of the program, which added to the feeling of creative value on the part of both students and staff. Parents of participating students were invited to hear guest artists, to attend classes and generally share in the creative experience with their child.

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Method

Experimental and control groups were selected from a pool of 3009 students in grades 7, 8, 9, and 10 in 1967 who were interested in the Living Arts Program. Experimental and control groups of 188 each, 51 males and 137 females, were divided in 62 high, 62 middle, and 64 low creative groups based on scores from the Things Done on Your Own Checklist developed by Torrance (1962). The mean score was 36.22 with a standard deviation of 15.67. High creative was defined as one standard deviation above the mean, middle creative at the mean, and low creative scored one standard deviation below the mean. All subjects were matched for age, sex, and school attended. After three years, attrition reduced the experimental groups to 35, 24 females and 11 males. The decrease in sample size caused a change from the 3 x 3 analysis of variance design to a comparison of experimental and control groups by sex using the "t" test and Mann-Whitney "U" test where appropriate. Differences were judged significant at or beyond the .05 level.

Creativity was measured by a variety of techniques. Creative thinking by the Torrance Tests of Creative Thinking, Verbal & Figural, Form A (Torrance, 1969); aesthetic sensitivity and preference for complexity by the Barron-Welsh Art Scale (1959); personality by a self-rating scale of 22 bipolor items judged to be characteristic of a creative personality; and interest and participation in creative activities by a questionnaire.

Discussion and Results

Torrance (1965) studied two groups of high school seniors who participated in "Man, Nature, and the Arts" seminars for less than a year. The program was intended to increase the students perception and understanding of the natural and man made

worlds and was completed in less than a year. Participants gained in ideational fluency, flexibility, originality, elaboration, and inventive level compared to pre-test scores.

Brown (1965) using college juniors during a semester course found that an experimental group encouraged to become more creative in their thinking earned significantly higher scores on the Barron-Welsh Art Scale than a control group.

The studies by Torrance and Brown are of value in suggesting that creative behavior may be enhanced by systematic means. Both studies have limitations that are corrected in the present study where a three year longitudinal design, a control group, and various means of measuring creativity are used.

Table 1 presents the Mann-Whitney U Test results for the male subjects while Table 2 presents "t" test results for the female subjects.

All students who participated in the program had significantly more community cultural experiences than the control group. Specifically, participants attended symphony orchestra concerts, visited the art museum, attended theatre performances, and participated in local community art organizations more often than the control group.

Both male and female participants earned significantly higher scores in verbal fluency, flexibility, and originality. These findings indicate participants produced more ideas, showed greater variety of ideas and were capable of shifting frames of reference or using a variety of strategics in generating ideas than the control groups.

No significant differences were found between experimental and control groups, either male and female, on figural test of fluency, flexibility, and originality.

Table 1

Means, Standard deviations and Mann-Whitney U results for male experimental and control groups

	MALE EXPERIMENTAL		MALE CONTROL		
	M	SD	M	SD	U
Cultural Institutions Visited	16.4	1.567	12.6	4.632	26.500*
Performances Attended	12.5	2.622	9.0	6.465	29.000*
Creative Activities	13.8	3.027	8.2	2.926	11.000***
Creative Experiences Total Score	42.7	5.350	30.4	12.564	22.500*
Verbal Fluency	55.0	8.367	42.7	11.037	20.500*
Verbal Flexibility	71.8	7.834	58.6	19.377	32.000*
Verbal Originality	65.0	14.663	51.8	13.467	31.500*
Figural Fluency	43.2	7.508	37.7	10.808	41.000 n.s.
Figural Flexibility	47.3	7.538	44.1	10.913	49.500 n.s.
Figural Originality	38.2	12.505	43.2	12.303	45.500 n.s.
Figural Elaboration	55.0	9.487	57.6	19.582	57.500 n.s.
Personality	119.1	12.903	106.6	11.147	31.000*
Barron-Welsh Art Scale	33.4	11.902	22.1	12.054	28.500*

* Significant beyond .05 level

*** Significant beyond .001 level

Note: N = 11 males in each group

Table 2

Means, Standard deviations and t ratios for female experimental and control groups

	FEMALE EXPERIMENTAL		FEMALE CONTROL		
	M	SD	M	SD	U
Cultural Institutions Visited	15.1	2.781	11.9	3.944	3.147**
Performances Attended	12.2	3.967	7.7	4.914	3.449**
Creative Activities	12.4	4.189	7.4	2.961	4.674***
Creative Experiences Total Score	39.7	9.333	27.2	10.257	4.308***
Verbal Fluency	55.2	8.140	45.0	11.325	3.510**
Verbal Flexibility	73.3	10.495	62.0	18.143	2.584*
Verbal Originality	63.3	12.482	52.7	15.116	2.610*
Figural Fluency	42.9	7.650	39.0	11.608	1.366 n.s.
Figural Flexibility	47.9	7.360	44.4	11.259	1.263 n.s.
Figural Originality	40.8	11.293	44.0	14.445	-0.817 n.s.
Figural Elaboration	58.5	9.722	54.1	16.606	1.101 n.s.
Personality	115.3	12.216	108.0	12.872	1.971 n.s.
Barron-Welsh Art Scale	31.0	11.660	27.6	11.938	0.958 n.s.

* Significant beyond .05 level

** Significant beyond .01 level

*** Significant beyond .001 level

Note: N= 24 females in each group

Only the male participants reported themselves to have more personality characteristics associated with the creative person. They reported themselves to be more mentally active, curious, sensitive to ideas, confident, aesthetic, and ingenious than the male control group.

Males but not female experimentals showed significantly higher scores on the Barron-Welsh Art Scale, an indication they became more aesthetidy sensitive, more independent in judgement and developed a stronger preference for complexity than the control males.

These results suggest that students who have favorable experiences in an environment which values creativity are likely to become more creative than adolescents who do not experience such an environment. Opportunity and encouragement lead to greater participation in cultural experiences in the local community. Thinking abilities that emphasized facility, penetration, depth, and originality were improved. An interesting result was that the male experimental group but not the female experimental group became more sensitive to the aesthetic in life and perceived themselves as more creative persons when compared to controls.

References

Barron, F. and Welsh, G. S. Barron-Welsh Art Scale. Palo Alto: Consulting Psychologists Press, 1959.

Brown, G. I. A Second Study in the Teaching of Creativity. Harvard Educational Review, 1965, 35, 39-54.

Torrance, E. P. Guiding Creative Talent. Englewood Cliffs, N. J.: Prentice-Hall, 1962.

Torrance, E. P. Rewarding Creative Behavior. Englewood Cliffs, N. J.: Prentice-Hall, 1965.

Torrance, E. P. Manual for Torrance Tests of Creative Thinking. Princeton: Personnel Press, 1966.